## Assignment 2

The due date for submitting this assignment has passed. Due on 2021-02-07, 23:59 IST.

As per your marks, you have not submitted this assignment.

### Question 1

1. The following criteria of cathodic protection may not ensure the buried structure is cathodically protected from corrosion

<table>
<thead>
<tr>
<th>Criteria</th>
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<tbody>
<tr>
<td>- stray stray</td>
<td>4 (out of 10)</td>
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</table>

### Accepted Answers

- stray stray

### Question 2

2. Which of the following combinations makes cathodic protection efficient?

- Anode placed in low resistivity soil and pipeline in high resistivity soil
- Anode placed in high resistivity soil and pipeline in low resistivity soil
- Anode placed in low resistivity soil and pipeline in low resistivity soil

### Accepted Answers

- Anode placed in low resistivity soil and pipeline in low resistivity soil

### Question 3

3. If the soil resistivity is high and the pipeline agency does not have right of way to establish remote ground bed, the next step for cathodic protection is to choose:

- Deep well ground bed
- Sacrificial anode
- Cathodic protection
-Buried anodes

### Accepted Answers

- Deep well ground bed

### Question 4

4. Cathodic protection of buried pipeline using an anode in the soil products

- External surface
- Internal surface
- Both above

### Accepted Answers

- Both above

### Question 5

5. Which of the following can the advantage in choosing DDGS in survey

- High accuracy in finding defective coatings
- Low variability in any testing area
- Requires multiple personnel to operate
- Requires all the above

### Accepted Answers

- Requires all the above

### Question 6

6. For a pipeline not protected cathodically, the hot spots can be (determined) needed by the following measurements

- Line current measurements
- Pipe-to-soil potential readings
- Check the line-pipe-to-soil potential measurements
- None of the above

### Accepted Answers

- None of the above

### Question 7

7. The most appropriate technique to detect malfunctioning of anode

- Soil resistivity
- Line current measurement
- Pipe-to-soil potential readings
- All of the above

### Accepted Answers

- All of the above

### Question 8

8. The main function of backfill for anode bed is

- To reduce corrosion
- To lower the current needed for cathodic protection
- To lower the resistance offered by the anode bed
- None of the above

### Accepted Answers

- None of the above

### Question 9

9. The following is the low indication of the extent of cathodic protection of a pipeline

- Pipe-to-soil potential
- The extent of polarization from the natural potential
- The amount of current supplied to a pipeline to lower corrosion

### Accepted Answers

- The amount of current supplied to a pipeline to lower corrosion

### Question 10

10. Calculate the maximum number of anodes needed to cathodically protect pipeline (6 miles).

- anode spacing, 1000 ohms
- hydraulic factor, 0.35
- iron with galvanic potential of -0.8 V (SCm)
- current needed to protect the pipeline is 75 mA.

<table>
<thead>
<tr>
<th>Value</th>
<th>Calculation</th>
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<tbody>
<tr>
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<td>current needed to protect the pipeline</td>
<td>75 mA</td>
</tr>
</tbody>
</table>

### Accepted Answers

- 6 anodes

### Question 11

11. The options are as follows:

- A, B, C
- A, B, C
- A, B, C
- A, B, C

### Accepted Answers

- A, B, C